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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,965	02/27/2006	Neil R Branda	CDM/2353.0011	3983

7590 08/21/2009  
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EXAMINER
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SHTERENGARTS, SAMANTHA L

ART UNIT	PAPER NUMBER
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1626

MAIL DATE	DELIVERY MODE
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08/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,965	<b>Applicant(s)</b> BRANDA ET AL.	
	<b>Examiner</b> Samantha L. Shterengarts	<b>Art Unit</b> 1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 17-42 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 17-42 is/are rejected.
- 7) ☒ Claim(s) 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/3/09, 2/3/09</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. The instant application is a national stage entry of PCT/CA03/01216, filed August 11, 2003, which claims priority to U.S. Provisional application nos. 60/402,081, filed August 9, 2002 and 60/442,063, filed January 24, 2003.

### ***Information Disclosure Statement***

2. The information disclosure statements (IDS) submitted on February 2, 2009 were in compliance with the provisions of 37 CFR 1.97 and 37 CFR 1.98. The IDS documents were considered. A signed copy of each form 1449 is enclosed herewith.

### ***Election/Restrictions***

3. Applicant's election with traverse of Group I in the reply filed on April 22, 2009 is acknowledged. Upon further consideration, the restriction requirement is withdrawn.

4. Claims 1, 3-11, and 17-42 are examined herein.

### ***Claim Rejections - 35 USC § 112***

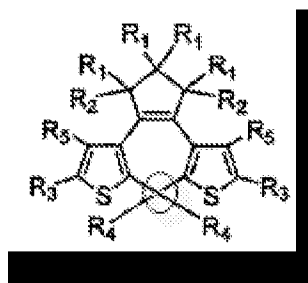
The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 3-11, and 17-42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

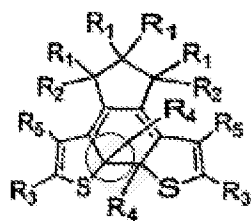
a. In the compounds of formula I, the following structural moiety is shown:

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. The circled portion is unclear because Examiner cannot ascertain whether Applicant is claiming a tetra cyclic ring system with the center 7 membered ring, wherein that position of the 7 membered ring is disubstituted with  $R_4$ , or whether the  $R_4$  substituents are simply substituents on each of the thiophene rings, and there is no polycyclic ring system being claimed.

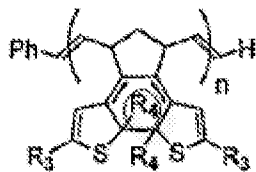
- b. In the compounds of formula II, the following structural moiety is shown:



. The circled portion is unclear because Examiner cannot ascertain whether Applicant is claiming that substituent  $R_4$  is coming out of the page, as a substituent of the carbon shared between the thiophene ring and carbocyclic ring, or whether there is a bridged ring system being claimed.

- c. The claims recite the phrase, "or both  $R_2$  when taken together form  $CH=CH$  and forms part of a polymer backbone." It is unclear whether Applicants are claiming that the  $R_2$  substituents connect within the 5 membered ring, or outside of the ring, in either case forming a type of bridged ring system.
- d. In the compounds of formula IV, the following structural moiety is shown:

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. The circled portion is unclear because Examiner cannot ascertain whether Applicant is claiming  $R_4$  as a substituent on the carbon shared between the thiophene ring and carbocyclic ring, or whether  $R_4$  is the name of the carbocyclic ring.

e. The claims recite "aryl;" however, it is not defined in the specification. The International Union of Pure and Applied Chemistry (IUPAC) Gold Book defines aryl groups as the following: **aryl groups:** Groups derived from arenes by removal of a hydrogen atom from a ring carbon atom. Groups similarly derived from heteroarenes are sometimes subsumed in this definition. It is unclear to Examiner whether or not aryl groups include or do not include heteroaryl groups within their definition as claimed.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

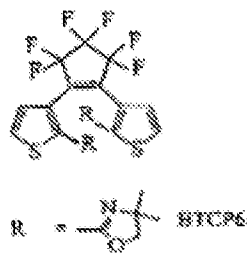
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3-7, 9, 24-25, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Nees et al. [Nees, D. Switching flow and phase behavior in surfactant systems via photochemical reactions. Progress in Colloid and Polymer Science. 101 (1996) 75-85.]

The following formula on page 77 anticipates the instantly claimed compounds of formula II and their uses electrochromic and/or photochromic devices.

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Where in the instant claims,  $R_1$  and  $R_2 = F$ ,  $R_3 = H$ ,  $R_5 = H$ , and  $R_4 = \text{aryl} =$

heteroaryl = 1,3-oxazole

### *Claim Objections*

7. Claim 23 is objected to because of the following informalities: A claim must stand alone without reference to the specification. See MPEP 2173.05(s). Please import reaction schemes into claims. Appropriate correction is required.

### *Conclusion*

8. No claims are allowed.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samantha Shterengarts whose telephone number is (571)270-5316. The examiner can normally be reached on Monday thru Thursday 9-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Joseph K. McKane can be reached on 571-272-0699. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Samantha L. Shterengarts/  
Examiner, Art Unit 1626

/Kamal A Saeed/  
Primary Examiner, Art Unit 1626